

**PATENT**

Customer No. 25280

Attorney Docket No. 5657

**IN THE UNITED STATES PATENT AND TRADEMARK OFFICE**

In re Application of: Kimbrell et al.

Application No. 10/699,899

Filed: November 3, 2003

For: TEXTILE SUBSTRATES, COMPOSITIONS  
USEFUL FOR TREATING TEXTILE  
SUBSTRATES, AND RELATED METHODS

Group Art Unit: 1771

Examiner: Juska, Cheryl Ann

Mail Stop Appeal Brief-Patents  
Commissioner for Patents  
P.O. Box 1450  
Alexandria, VA 22313-1450

**APPELLANTS' BRIEF IN SUPPORT OF AN APPEAL**

Sir:

The claims of the above-identified patent application were the subject of an Office Action dated July 16, 2007. In response to the Office Action, Appellants filed a "Notice of Appeal from the Examiner to the Board of Patent Appeals and Interferences" on January 16, 2008, which was received by the Office on January 16, 2008. The following is Appellants' Brief in support of the aforementioned Notice of Appeal.

**I. REAL PARTY IN INTEREST**

The above-identified patent application is the subject of an assignment to Milliken & Company, which is the real party in interest.

**II. RELATED APPEALS AND INTERFERENCES**

Appellants are not aware of any prior or pending appeals, interferences, or judicial proceedings which may be related to, directly affect, or be directly affected by or have a bearing on the Board's decision in the pending appeal.

**III. STATUS OF CLAIMS**

Claims 7, 9-17, 50, and 51 currently are pending in the application. Claims 1-6, 8, and 18-49 have been cancelled.

**IV. STATUS OF AMENDMENTS**

No amendments have been submitted subsequent to the mailing of the rejection set forth in the Office Action dated July 16, 2007.

**V. SUMMARY OF CLAIMED SUBJECT MATTER**

The claimed subject matter is directed to floor covering and carpet having applied thereto a composition for imparting soil resistance and stain release to the floor covering or carpet.

In a first embodiment, such as that recited in claim 7, the floor covering comprises a scoured substrate and a composition applied to the scoured substrate (see, e.g., page 7, lines 8-15). The composition comprises a first fluorochemical repellent component (see, e.g., page 10, line 20 – page 13, line 13), a second stain

blocking component (see, e.g., page 13, line 23 – page 15, line 24), an inorganic particulate component (see, e.g., page 19, line 15 – page 24, line 14), and a hydrophobic cross-linking agent (see, e.g., page 18, lines 10-21).

In a second embodiment, such as that recited in claim 11, the floor covering comprises a scoured substrate and a composition applied thereon (see, e.g., page 7, lines 8-15). The composition comprises a fluorochemical repellent component (see, e.g., page 10, line 20 – page 13, line 13), a stain resist component (see, e.g., page 16, lines 18-23 and page 18, lines 22-26), at least one hydrophilic stain release component (see, e.g., page 15, line 25 – page 16, line 17), an inorganic particulate component (see, e.g., page 19, line 15 – page 24, line 14), and a hydrophobic cross-linking agent (see, e.g., page 18, lines 10-21).

In a third embodiment, such as that recited in claim 50, the composition applied to the scoured carpet (see, e.g., page 7, lines 8-15) comprises a first fluorochemical repellent component (see, e.g., page 10, line 20 – page 13, line 13), a second stain blocking component (see, e.g., page 13, line 23 – page 15, line 24), an inorganic particulate component (see, e.g., page 19, line 15 – page 24, line 14), and a hydrophobic cross-linking agent (see, e.g., page 18, lines 10-21).

In a fourth embodiment, such as that recited in claim 51, the composition applied to the scoured floor covering (see, e.g., page 7, lines 8-15) comprises a first fluorochemical repellent component (see, e.g., page 10, line 20 – page 13, line 13), a second component selected from the group consisting of sulfonated novolak resins, acrylic resins, and blends of sulfonated novolak resins and acrylic resins (see, e.g., page 16, lines 18-23 and page 18, lines 22-26), a particulate component (see, e.g., page 19, line 15 – page 24, line 14), and a hydrophobic cross-linking agent (see, e.g., page 18, lines 10-21).

**VI. GROUNDS OF REJECTION TO BE REVIEWED ON APPEAL**

The rejection of claims 7, 9-11, 13-17, 50, and 51 under 35 U.S.C. § 103(a) as allegedly unpatentable over U.S. Patent No. 5,908,663 (Wang et al.) (hereinafter “the Wang ‘663 patent”) in view of U.S. Patent Application Publication No. 2002/0064639 (Rearick et al.) (hereinafter “the Rearick ‘639 publication”) and/or U.S. Patent Application No. 2004/0058072 (Rearick et al.) (hereinafter “the Rearick ‘072 publication”).

The rejection of claims 7, 9-11, 13-17, 50, and 51 under 35 U.S.C. § 103(a) as allegedly unpatentable over the Wang ‘663 patent in view of U.S. Patent No. 6,451,717 (Fitzgerald et al.) (hereinafter “the Fitzgerald ‘717 patent”).

The rejection of claim 12 under 35 U.S.C. § 103(a) as allegedly unpatentable over the Wang ‘663 patent in view of U.S. Patent No. 5,573,553 (McBride et al.) (hereinafter “the McBride ‘553 patent”).

The rejection of claim 12 under 35 U.S.C. § 103(a) as allegedly unpatentable over the Wang ‘663 patent in view of the Fitzgerald ‘717 patent and the McBride ‘553 patent.

**VII. ARGUMENT**

As is evident from the foregoing description of the appealed rejections, the Examiner relies upon the Wang ‘663 patent as the primary support for each rejection leveled against the pending claims. Appellants submit that, for the following reasons, the subject matter defined by the pending claims cannot properly be considered *prima facie* obvious over the Wang ‘663 patent in combination with the other cited references.

A. *The Proposed Combinations are Contrary to the Principle of Operation of the Wang '663 Patent*

In its rejections, the Office Action appears to rely upon the Wang '663 patent as generally teaching the principle of applying an inorganic particulate to the surface of a carpet. However, Appellants respectfully submit that the Wang '663 patent's teachings are not so general and, in fact, are based on a very specific principle of operation that the Office Action ignores in constructing its rejections.

The Wang '663 patent is generally directed to a method for treating carpets which allegedly obviates the need for scouring. As noted in the Wang '663 patent, "scouring" generally refers to a method of removing oil residues and spin finishes from the surface of carpet fibers by treating the carpet with a cleaning solution designed to remove the oil residues and spin finishes. These oil residues and spin finishes are believed to significantly increase the soiling tendency of the carpet (see, e.g., the Wang '663 patent).

More specifically, the Wang '663 patent discloses a method in which an unscoured carpet is treated with a topical solution or dispersion containing an inorganic additive (see, e.g., the Wang '663 patent at col. 2, lines 62-65). The inorganic additive can be either an inorganic oxide or a basic metal salt (see, e.g., the Wang '663 patent at col. 3, lines 52-55). The Wang '663 patent discloses that "the residual oils or spin finish on the surface of the carpet fibers are adsorbed into the surfaces of the inorganic additive, where they are no longer able to contribute to the soiling or soiling tendencies of the carpet" (the Wang '663 patent at col. 2, lines 54-58). Thus, according to the Wang '663 patent, the method disclosed therein operates by providing an inorganic additive that adsorbs the residual oils and/or spin finish on the surface of the carpet fibers. The removal of these oils and spin finish

then reduces the soiling or soiling tendencies of the carpet relative to a carpet from which the oils and spin finish have not been removed.

The subject matter defined by the pending claims is directed to floor covering and carpet comprising a *scoured* substrate. Because the substrate has been scoured, it contains very little residual oil or spin finish. For example, claim 11 recites that the scoured substrate has less than 0.3% by weight oil residue. Thus, the floor covering and carpet defined by the pending claims would contain very little, if any, residual oil or spin finish to be adsorbed onto the surface of an inorganic additive.

The combinations suggested by the Office Action would therefore require a change in (or a complete disregard of) the basic principle under which the method and compositions described in the Wang '663 patent were intended to operate. In particular, in order to arrive at the combinations proposed by the Office Action, one of ordinary skill in the art would need to completely recast or disregard the Wang '663 patent's express teaching that the inorganic additive is used to adsorb residual oils and spin finish on the surface of the fibers. Such combinations cannot properly serve as the basis for a *prima facie* obviousness rejection. See, e.g., *In re Ratti*, 270 F.2d 810, 123 USPQ 349 (C.C.P.A. 1959).

For this reason alone, Appellant submits that the obviousness rejections of the pending claims over the Wang '663 patent are improper and should be withdrawn.

*B. The Proposed Combinations are based on an Improper Hindsight Reconstruction of the Claimed Subject Matter*

As noted above, the subject matter recited in the pending claims is directed to floor covering and carpet comprising a scoured substrate. Such substrates contain

very little, if any, residual oils or spin finish. Nevertheless, the Office Action asserts that it would have been obvious for one of ordinary skill in the art to modify the Wang '663 patent in order to arrive at the claimed subject matter.

However, the Office Action does not appear to point to any other reference or knowledge generally available to those of ordinary skill in the art teaching that inorganic additives such as those disclosed in the Wang '663 patent can function in a manner other than that described in the patent (i.e., as an adsorbent for the residual oils and spin finish present on the carpet fibers). For example, none of the remaining references appears to disclose or suggest that the inorganic additives described in the Wang '663 patent can serve a different purpose or function.

Appellants therefore respectfully submit that, based on the present record, one can only arrive at the combinations proposed by the Office Action through an improper hindsight reconstruction of the claimed subject matter using the Appellants' disclosure as a blueprint for identifying and selecting individual elements from the cited references, such as the Wang '663 patent. Only then might one disregard the Wang '663 patent's express teachings and use the disclosed inorganic additives on a scoured substrate.

In view of the foregoing, Appellants respectfully submit that the subject matter defined by the pending claims cannot properly be considered *prima facie* obvious over the Wang '663 patent in combination with the other cited references.

## **VIII. CONCLUSION**

For the foregoing reasons, Appellants respectfully submit that the aforementioned grounds of rejection are improper. Therefore, Appellants respectfully request that the Board of Patent Appeals and Interferences

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reverse the aforementioned rejections set forth in the Office Action dated July 16, 2007.

Respectfully submitted,

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## CLAIMS APPENDIX

1-6. (Canceled)

7. (Previously Presented) A floor covering having an applied composition for imparting soil resistance, stain resistance, and stain release, said floor covering comprising:

- (a) a scoured substrate having fibers forming a pile;
- (b) a composition applied to said scoured substrate, said composition comprising:
  - (i) a first fluorochemical repellent component, said fluorochemical repellent component being provided at a concentration of at least about 0.1% SOC;
  - (ii) a second stain blocking component, said stain blocking component being selected from one or more of the group consisting of: sulfonated novolak resins, acrylic polymers, sulfonated polyester polymers, sulfonated surfactants, fluorochemical agents, acid-containing acrylic or acrylate polymers and copolymers, ethoxylated polyesters, ethoxylated nylon, cellulose derivatives, polyacrylamides, and sulfonated polymers;
  - (iii) an inorganic particulate component, said inorganic particulate component being selected from the group consisting of: silica-containing materials, zirconium-containing materials, titanium-containing materials, alumina-containing materials, inorganic oxide materials, basic metal salt materials, and metal oxide materials; and
  - (iv) a hydrophobic cross-linking agent;

wherein said composition is adapted for imparting substantial stain resistance and stain release to said floor covering.

8. (Canceled)

9. (Original) The floor covering of claim 7 wherein said composition further comprises at least two distinct component types which afford stain release properties to said floor covering.

10. (Original) The floor covering of claim 7 wherein said fibers of said scoured substrate comprise less than about 0.3% by weight oil residue.

11. (Previously Presented) A treated scoured floor covering having applied thereon a composition for imparting soil resistance and stain release to said treated floor covering, said floor covering comprising:

(a) a scoured substrate having a plurality of fibers, said fibers having less than about 0.3% by weight oil residue;

(b) a composition comprising:

(i) a fluorochemical repellent component;

(ii) a stain resist component;

(iii) at least one hydrophilic stain release component which imparts substantial stain release to said substrate; and

(iv) an inorganic particulate component; and

(v) a hydrophobic cross-linking agent.

12. (Original) The treated scoured floor covering of claim 11 in which said composition of said treated scoured carpet further comprises a bleach resistant component.

13. (Original) The treated scoured floor covering of claim 11 wherein said fluorochemical repellent component is provided at a concentration of at least about 0.1% SOC.

14. (Original) The treated floor covering of claim 11 wherein said stain resist component comprises at least one component selected from the group consisting of: sulfonated novalak resins, acrylic polymers, sulfonated polyester polymers, and sulfonated surfactants and combinations thereof.

15. (Original) The floor covering of claim 11 wherein said repellent component comprises a hydrophilic fluoroalkyl acrylate copolymer.

16. (Original) The floor covering of claim 11 wherein said stain resist component is selected from the group consisting of: fluorochemical agents, acid-containing acrylic polymers, copolymers, ethoxylated polyesters, ethoxylated nylon, cellulose derivatives, polyacrylamides, sulfonated polymers, and sulfonated polyesters.

17. (Original) The floor covering of claim 11 wherein said floor covering is selected from the group consisting of: bonded carpet, woven carpet, nonwoven carpet, rugs, carpet mats, noncushioned carpets and carpet tiles.

18-49. (Canceled)

50. (Previously Presented) A scoured carpet having applied thereon a composition for imparting soil resistance, stain resistance, and stain release to said scoured carpet, said composition comprising:

- (a) a first fluorochemical repellent component;
- (b) a second stainblocking component, said stainblocking component being selected from the group consisting of: sulfonated novalak resins, acrylic polymers, sulfonated polyester polymers, sulfonated surfactants, fluorochemical agents, acid-containing acrylic or acrylate polymers, copolymers, ethoxylated polyesters, ethoxylated nylon, cellulose derivatives, polyacrylamides, sulfonated polymers, and sulfonated polyesters, and/or mixtures thereof;
- (c) an inorganic particulate component, said inorganic particulate component being selected from the group consisting of: silica-containing materials, zirconium-containing materials, titanium-containing materials, alumina-containing materials, inorganic oxide materials, basic metal salt materials, and metal oxide materials; and
- (d) a hydrophobic cross-linking agent;

wherein said scoured carpet exhibits a relative resistance to dry soiling that reflects a color shade change delta delta E upon soiling and vacuuming in absolute value of about 10 or less.

51. (Previously Presented) A chemically treated fiber-containing scoured floor covering, said floor covering having applied thereon a composition for imparting

soil resistance, stain resistance, and stain release to fibers upon the surface of the floor covering, said composition comprising:

- (a) a first fluorochemical repellent component;
- (b) a second component, said second component being selected from at least one item from the group consisting of: i) sulfonated novolak resins, and ii) acrylic resins, and iii) blends of sulfonated novolak resins and acrylic resins;
- (c) an particulate component, said particulate component being selected from the group consisting of: silica-containing materials, zirconium-containing materials, titanium-containing materials, alumina-containing materials, inorganic oxide materials, basic metal salt materials, and metal oxide materials; and
- (d) a hydrophobic cross-linking agent;

wherein said chemically treated fiber-containing carpeting exhibits a resistance to dry soiling,  $\Delta \Delta E$  value, in absolute terms, of about 20 or less and further shows improvement as compared to untreated floor covering when tested by modified AATCC Test Method 123-2000.

**EVIDENCE APPENDIX**

NONE

**RELATED PROCEEDINGS APPENDIX**

NONE